

## Abstract of the Disclosure

An object of the invention is to provide a control apparatus and a control method having a simple constitution, which can stably perform switching of optical path in an optical signal exchanger, while suppressing an influence on a control due to the mechanical resonance of tilt mirrors. To this end, the control apparatus of the optical signal exchanger is constituted such that in an optical signal exchanger of three-dimensional type using one set of MEMS mirror arrays, each having a plurality of tilt mirrors arranged on a plane, each tilt mirror having a reflecting surface an angle of which is controllable, when the angle of the MEMS mirror on the optical path is feedback controlled by detecting power of an optical signal output from a specific position, a resonance component removing section that removes a resonance frequency component included in a control signal is shared corresponding to a pair of driving electrodes arranged in a coaxial direction of the MEMS mirror. As a result, the influence on the feedback control by a resonance action of the MEMS mirror can be reduced, while suppressing an increase in circuit size.